Display Discrete or Experimental Data

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Introduction

In addition to meshed data consisting of nodes and elements, EnSight also supports *discrete* or *measured* data. A measured dataset consists of a series of arbitrary points in space with no connectivity. Measured data can have associated variable data and can vary over time. Examples of measured data include fuel sprays, multi-phase flows, and experimental data.

Measured data cannot be loaded by itself – you must also specify a regular geometric mesh.

Basic Operation

Measured data is read into EnSight via the same dialog used to read meshed data:

1. **Select File > Data (Reader)... to open the File Selection dialog for data file selection.**

2. **Find the directory containing the data (see How To Read Data for more information on using File Selection).**

3. **If desired, select and specify a (meshed) geometry file and the corresponding result file.**

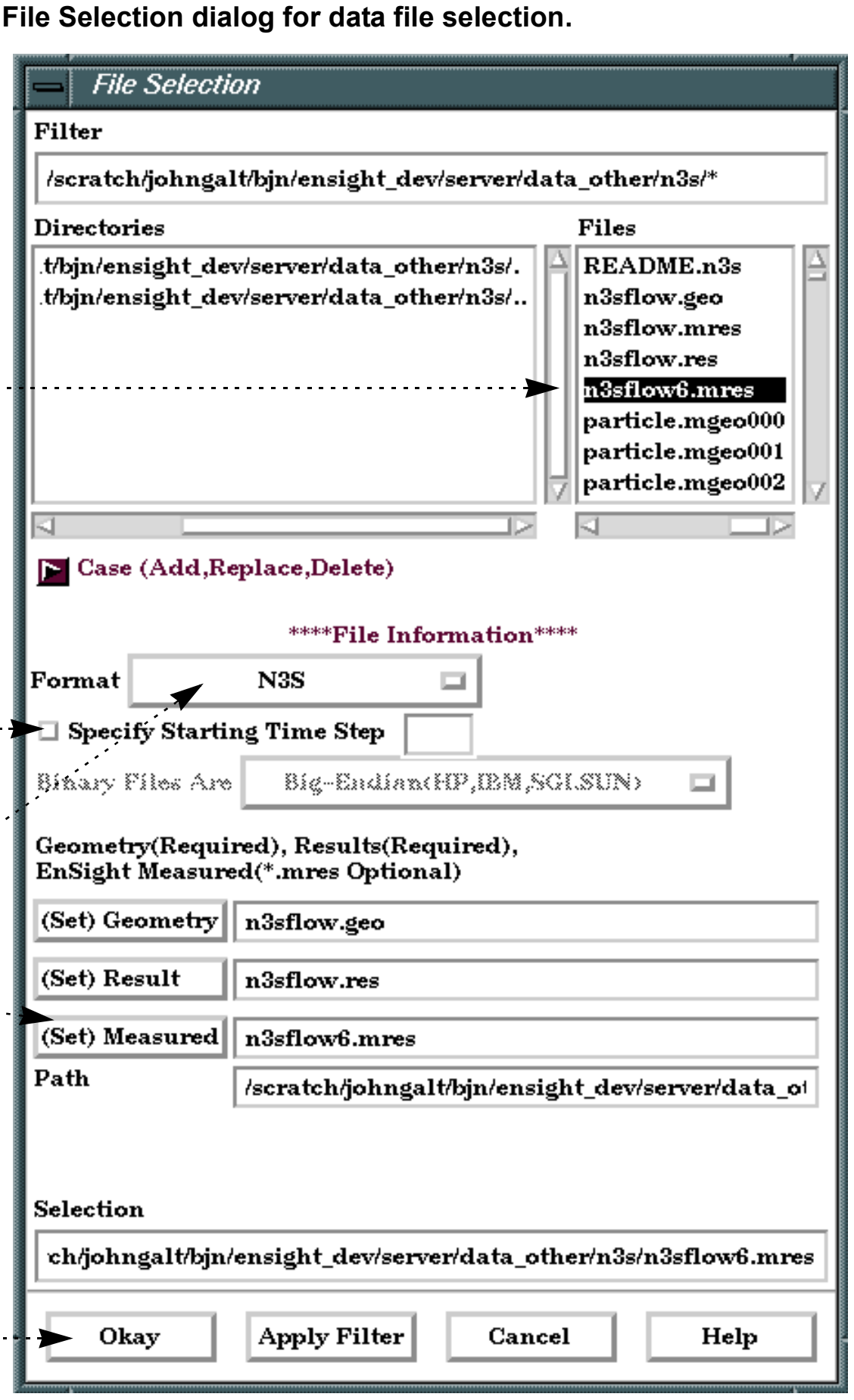
4. **Select the measured result file in the Files list.**

5. **If desired, specify an initial time step (the last step is the default).**

6. **If you are reading a meshed dataset (as directed in step 3), select the file format.**

7. **Click (Set) Measured to specify the selected measured result file.**

8. **Click Okay to begin the reading process.**



9. **The Data Part Loader dialog corresponding to the selected data file format (as set in step 6) will open. You do not have to perform any further action to load the measured data. However, if you are also loading meshed data, continue with the usual part loading process. For details, see the How To article for the chosen file format.**

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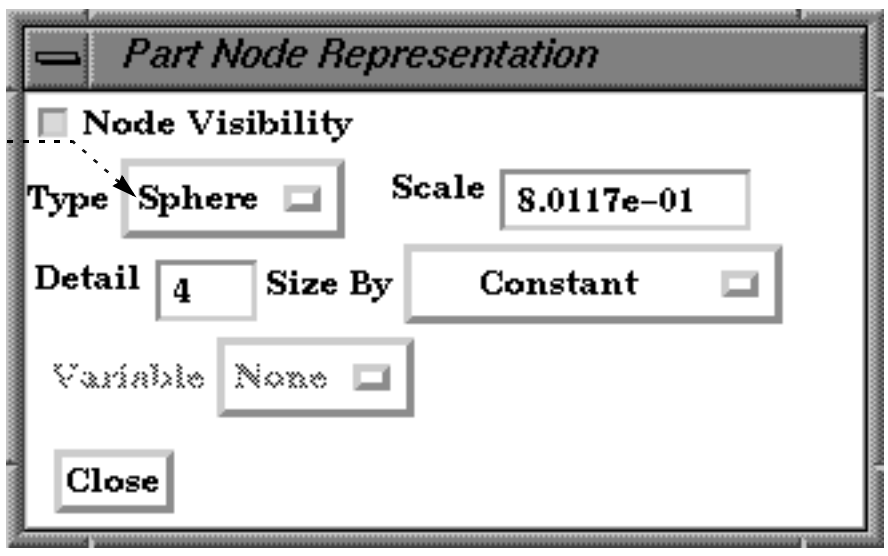
Measured data is represented as a single part. In the Main Parts list you should see a part named “Measured/ Particle” after loading.

Measured data is represented as a set of unconnected nodes. You can use EnSight’s ability to display nodes in various ways to accentuate measured data visualization. To change node display:

1. **Select the desired measured data part in the Main Parts list.**

2. **Click Part in the Mode Selection area to enter Part Mode.**

3. **Click the Node Representation icon to open the Part Node Representation dialog.**



4. **Select the desired node display type (Dot, Cross, or Sphere). See below for details on each type.**

5. **If applicable, set desired values for Scale, Detail, Size By, and Variable.**

- Dot: nodes are displayed as points.
- Cross: nodes are displayed as crosses and can be fixed size (size set by the Scale value) or sized based on a Variable (and scaled by the Scale value).
- Sphere: nodes are displayed as spheres and can be fixed size (size set by the Scale value) or sized based on a Variable (and scaled by the Scale value). Sphere detail controlled by Detail value.

Other Notes

The file formats for measured data and the measured results file are detailed in **EnSight5 Measured/Particle File Format**.

Transient measured data can be animated using either the **flipbook** or **keyframe animation** capability.

You can load multiple measured datasets simultaneously by using EnSight’s **cases** capability.

See Also

User Manual: **EnSight5 Measured/Particle File Format**